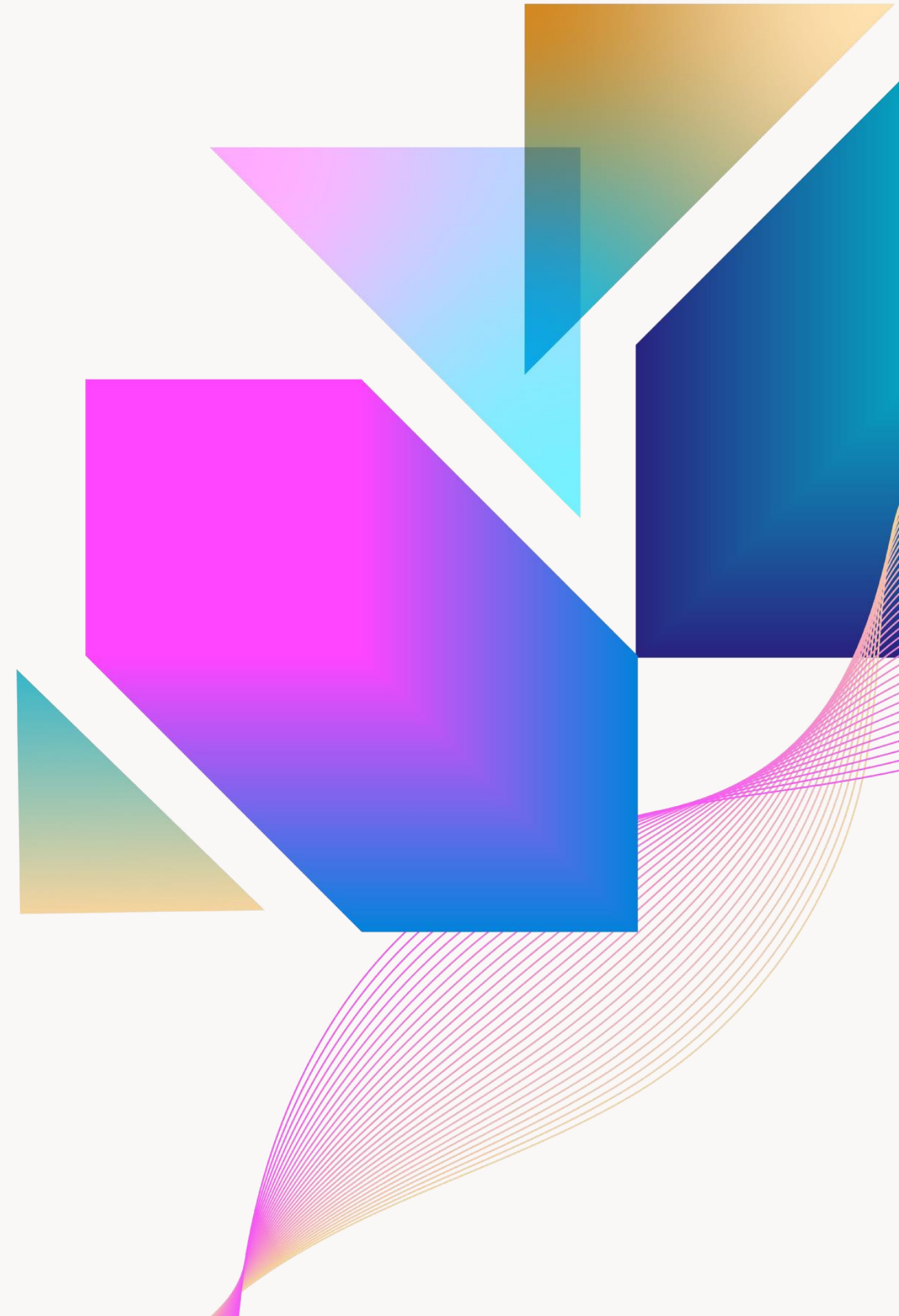




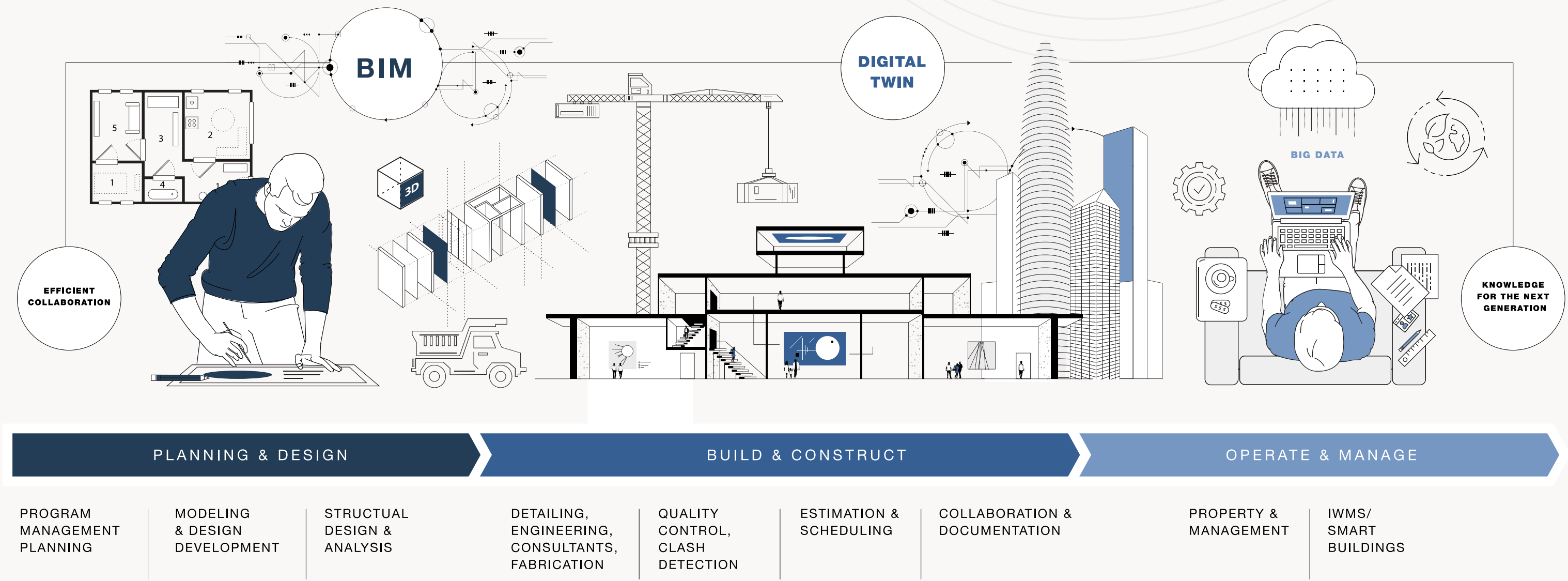
# Reaching the Next Level of BIM

Open, Connected, and Cloud-Based

Eduardo Lazzarotto  
CPO ALLPLAN (Nemetschek Group)



# BIM



# Why doesn't today's reality meet the vision?

## Proprietary Formats

- Purpose built to work within an ecosystem
- Creates intentional data cliffs in a BIM workflow

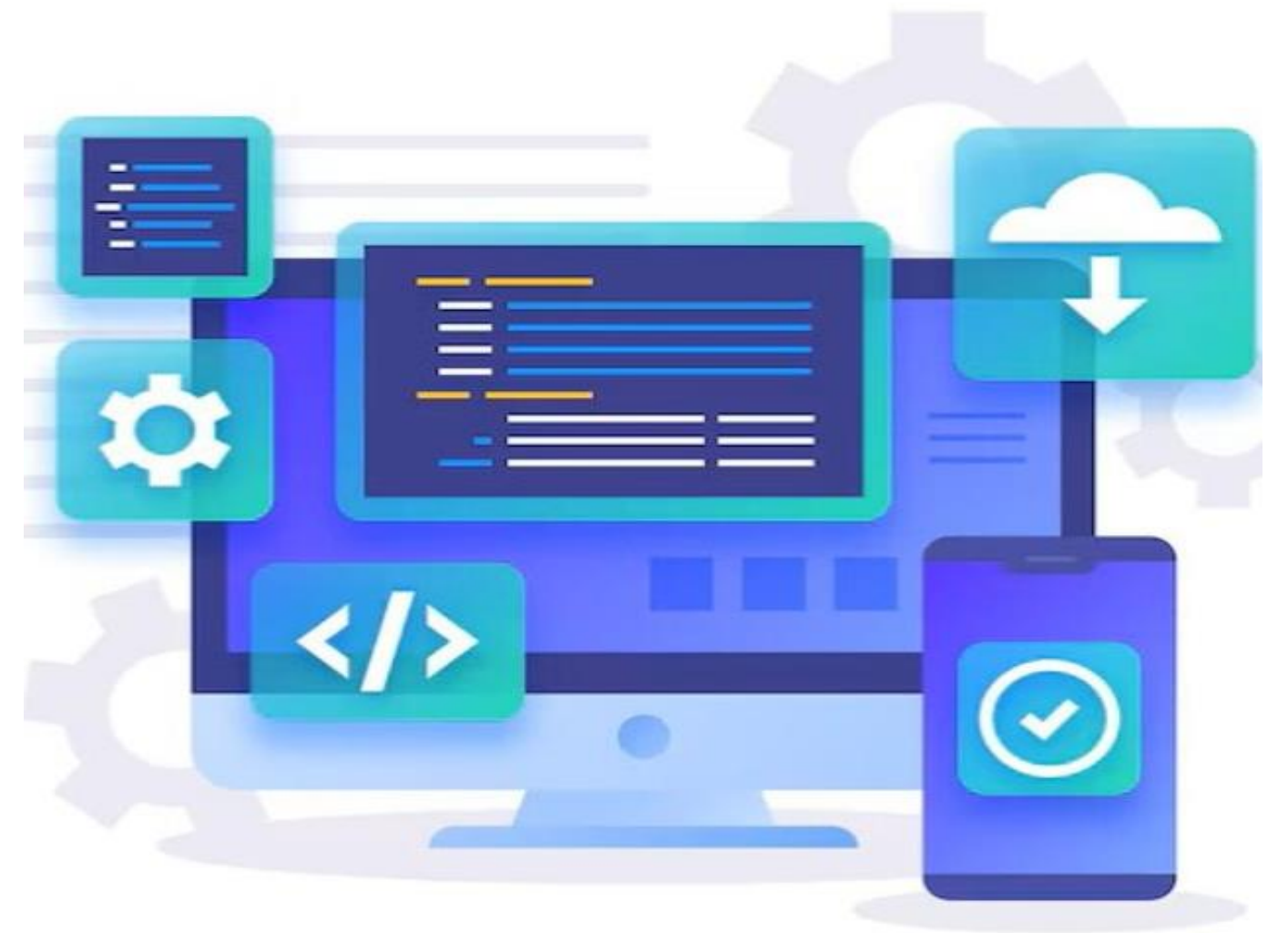
## Limited Functionality

- Can lead to expensive customization
- Can hinder business expansion

## Platform Dependence

- Right tool for the right job
- Risk of reliance on a single vendor
- Improve leverage with vendors

**So how do we get  
to the next level?**





# BIMPLUS

Next level BIM

BIM “Level 5” Smart Digital Twin

**dTwin**<sup>TM</sup>  
A NEMETSCHKE SOLUTION

BIM “Level 4” Managed BIM Ecosystem

BIM “Level 3” Object Based Building DB

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BIM Level 2 Federated Model

CDE (DIN Spec 91391)

BIM Level 1 Digital 2D

Classic CDE-System

Data continuity

Interoperability

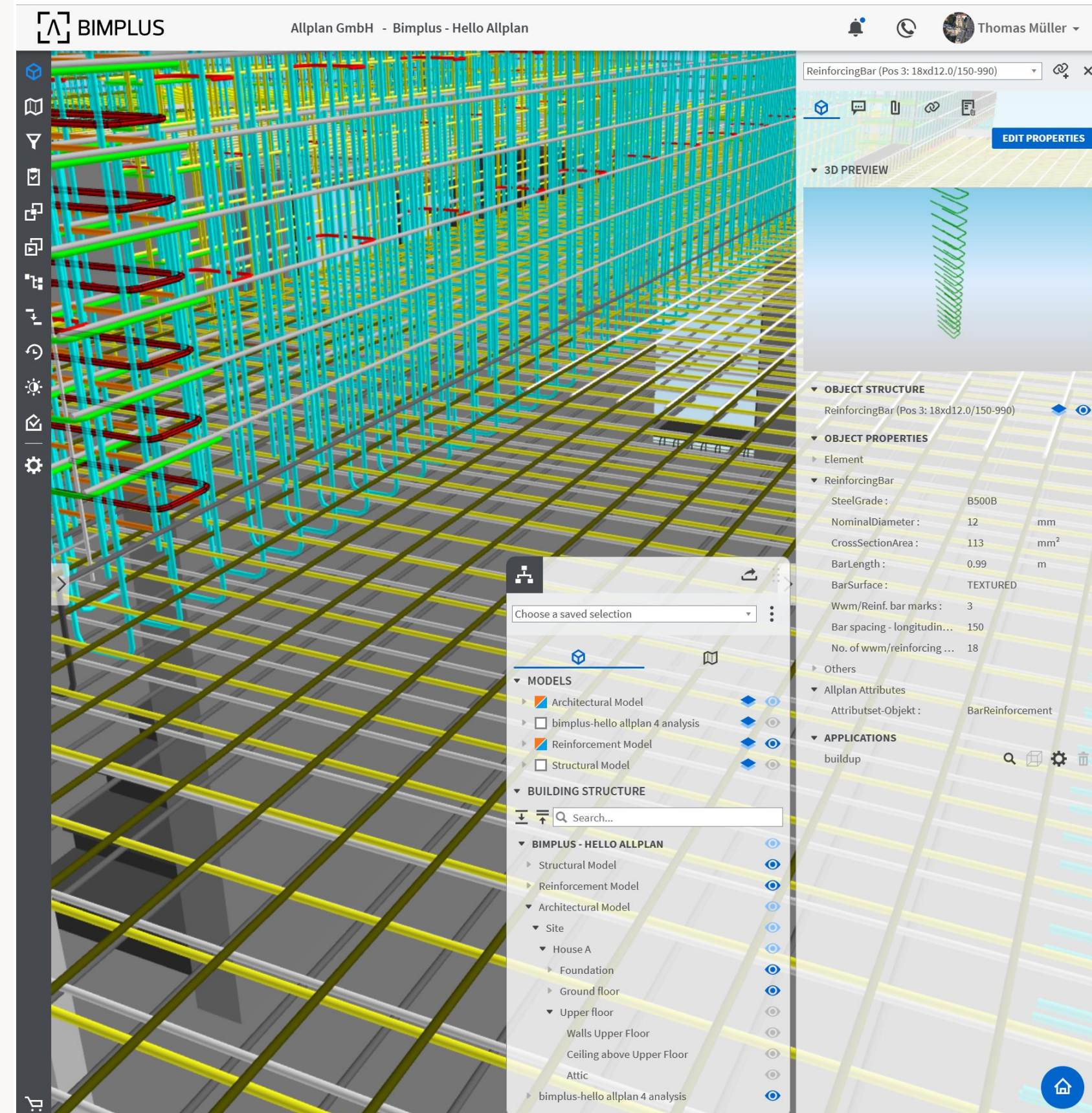
 openCDE

 openBIM



# Next Level Bim requires:

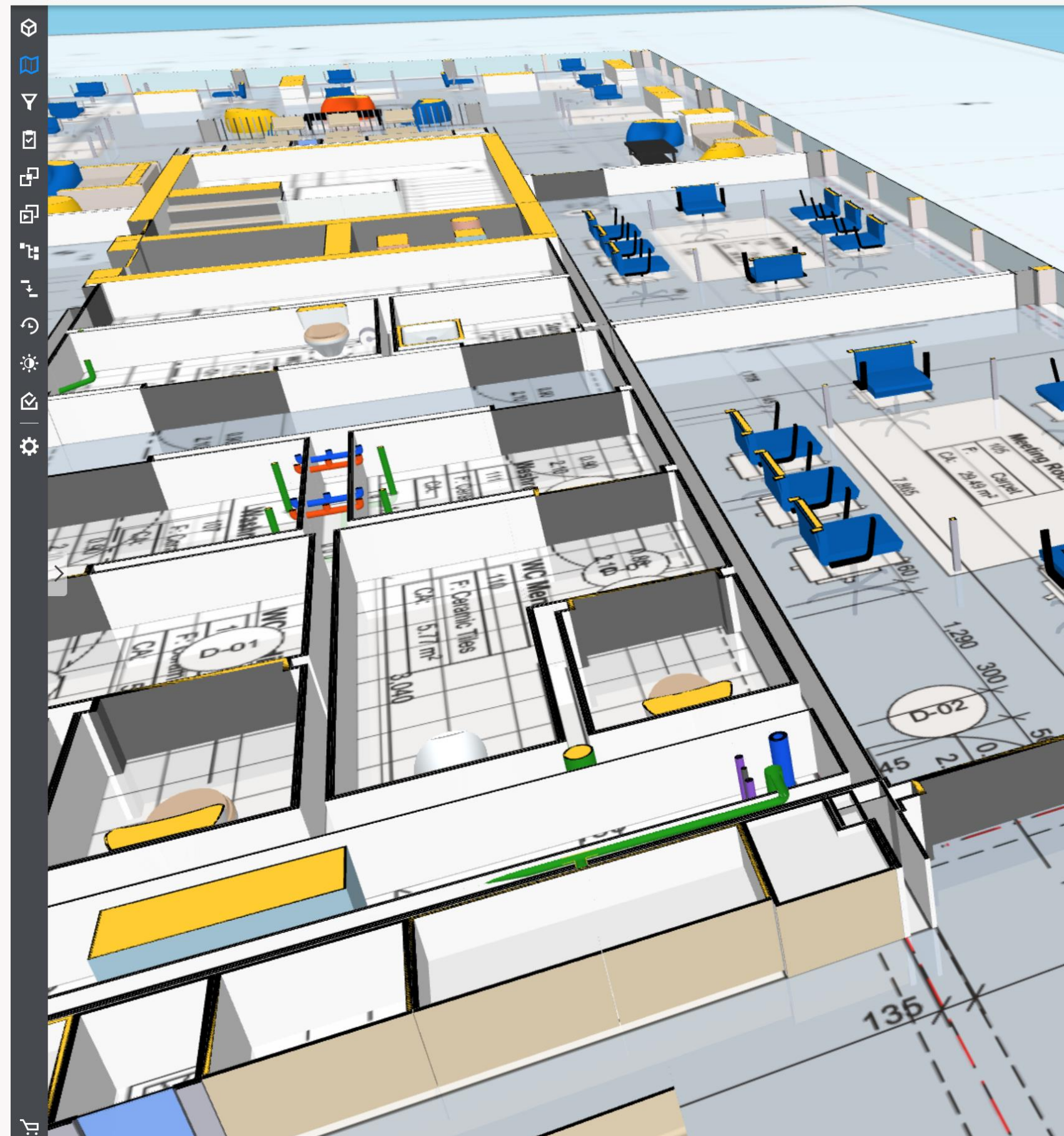
- **Relational Database Foundation:** database-first platform – not just a file / model viewer.
- **Federated Models:** platform in which sub-models from any source and any trade can be combined.
- **Data Neutralization:** platform that organizes data in a way that leaves the BIM platform independent.
- **Advanced Workflow Support:** revision tracking, issue management, integration via APIs.
- **Interoperability without intentional Data Silos:** OpenBIM connection with architectural and engineering authoring platforms to the downstream detailing tools.



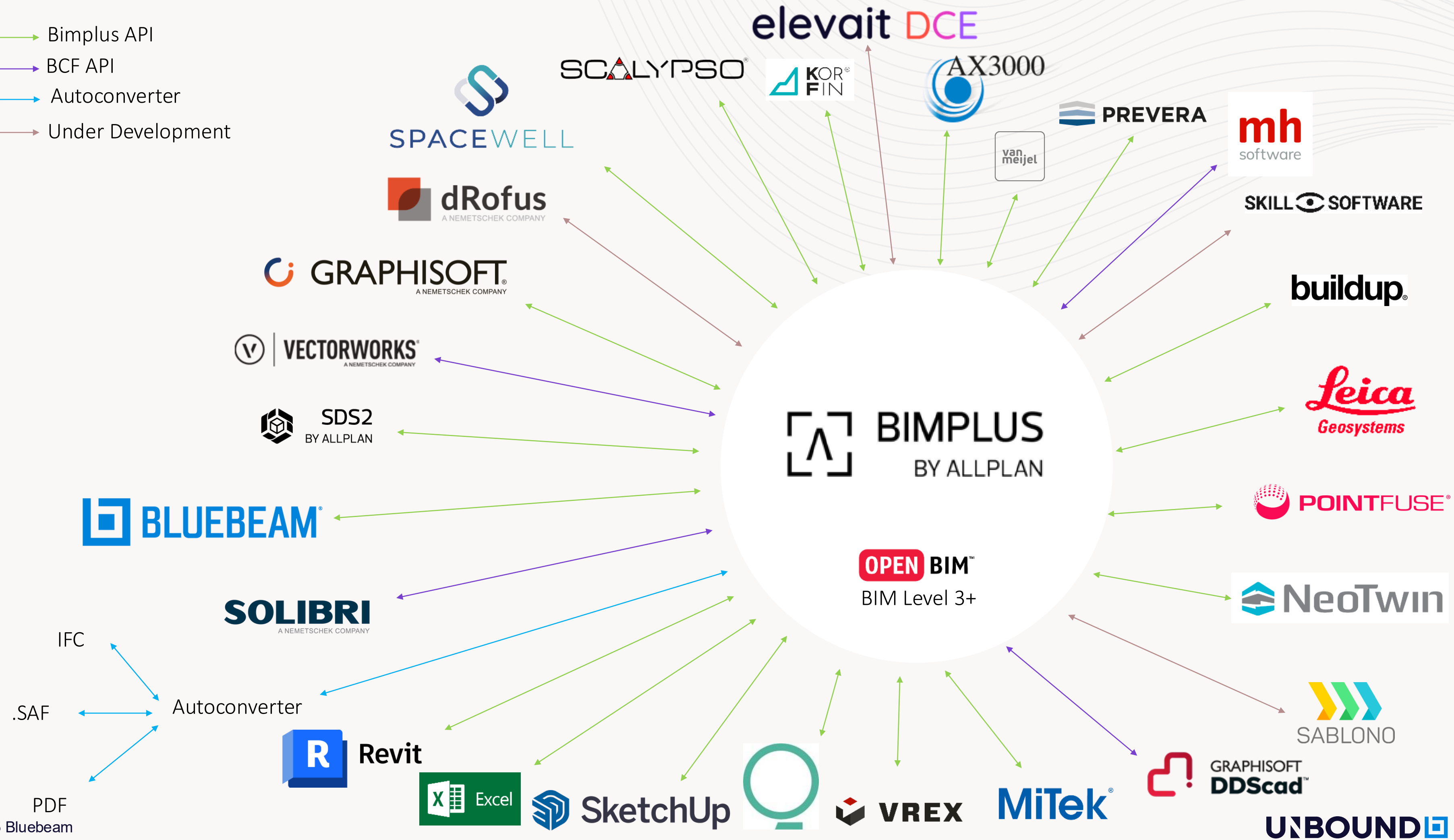


# BIMPLUS Transforms Collaboration

- **Unified Data:** Import IFC objects from any tool for seamless collaboration of measurements, issues, revisions and more.
- **Flexible Management:** Merge multiple IFC models and export as one.
- **Customizable Model Structure:** Add tailored properties to support specific workflows.
- **Integration Ecosystem:** Integrations with ALLPLAN, Archicad, Bluebeam, Revit, SDS2, Solibri and more.
- **Live Updates:** Cloud-hosted system instantly shares updated IFC properties for a dynamic, living model.
- **Convert IFCs:** Autoconverter functionality can convert a structural model to an analytical model creating neutral model data from any model authoring source.



- ↔ Bimplus API
- ↔ BCF API
- ↔ Autoconverter
- ↔ Under Development





The screenshot displays the 'Object Navigator' interface. At the top, there's a search bar with 'All' and a 'Custom filter' dropdown. Below this, the 'FILTER CRITERIA (1/5)' section shows 'Type' as the selected criterion. The main area is titled 'OBJECT STRUCTURE' and lists the object 'Wall (IW 10b)'. Under 'OBJECT PROPERTIES', the 'Element' section is expanded, showing a list of properties with checkboxes. The 'Type' property is checked. Below this, the 'MaterialLayerSet' and 'WallBaseQuantities' sections are visible, each with a list of properties and their values. At the bottom, a large purple banner reads 'FILTER DEFINITION'.

**Object Navigator**

All  
Custom filter

**FILTER CRITERIA (1/5)**

Type

**OBJECT STRUCTURE**

Wall (IW 10b)

**OBJECT PROPERTIES**

Producer Data

Element

☐ Name: ☐ IW 10b

☐ Description: ☐ ...

☒ Type: ☐ Wall

☐ Model: ☐ Allplan\_Kindergarten...

☐ Layer: ☐ Building

☐ Material: ☐ ...

☐ Surface: ☐ A:255 R:255 G:255 B:255

☐ Ifc ID: ☐ 3bsml5Wob25vwHXFL...

☐ IFC Object type: ☐ IfcWall

☐ PredefinedType: ☐ ...

☐ Owner: ☐ MÜLLER Thomas

☐ Modified by User: ☐ MÜLLER Thomas

MaterialLayerSet

**WallBaseQuantities**

☐ Length: ☐ 7

☐ Width: ☐ 0.24

☐ Height: ☐ 2.7

☐ GrossFootprintAr... ☐ ...

☐ NetFootprintArea: ☐ ...

☐ GrossSideArea: ☐ ...

☐ NetSideArea: ☐ 18.9

☐ GrossVolume: ☐ 4.54

☐ NetVolume: ☐ ...

☐ GrossWeight: ☐ ...

☐ NetWeight: ☐ ...

Others

**FILTER DEFINITION**

Total Wall (1)

Search...

**OVERLAY & COMPARE PDFS WITH 3D MODEL**

**CONTROL VIEW OF FEDERATED MODELS**

Name	Material	Net Volume	Gross Volume	Net Area	Gross Area
IW 10b	-	3.05 m³	4.54 m³	18.90 m²	18.90 m²
		3.05 m³	4.54 m³	18.90 m²	18.90 m²
		3.05 m³	4.54 m³	18.90 m²	18.90 m²



SELECTION

Type of selection

Results in selection

RESULT CASE

Type of result case

Location

EXTREME LOAD

Extreme load

Coordinate system

DRAWING SETTINGS

Display value

Display

Display

ILLUSTRATION

3D PREVIEW

EDIT PROPERTIES

OBJECT STRUCTURE

StructuralCurveAction (LF13)

OBJECT PROPERTIES

- Element
- Curve Action properties
- Load case properties
- Others

APPLICATIONS

buildup

ACTIONS

- Refresh
- Results to
- Report preview

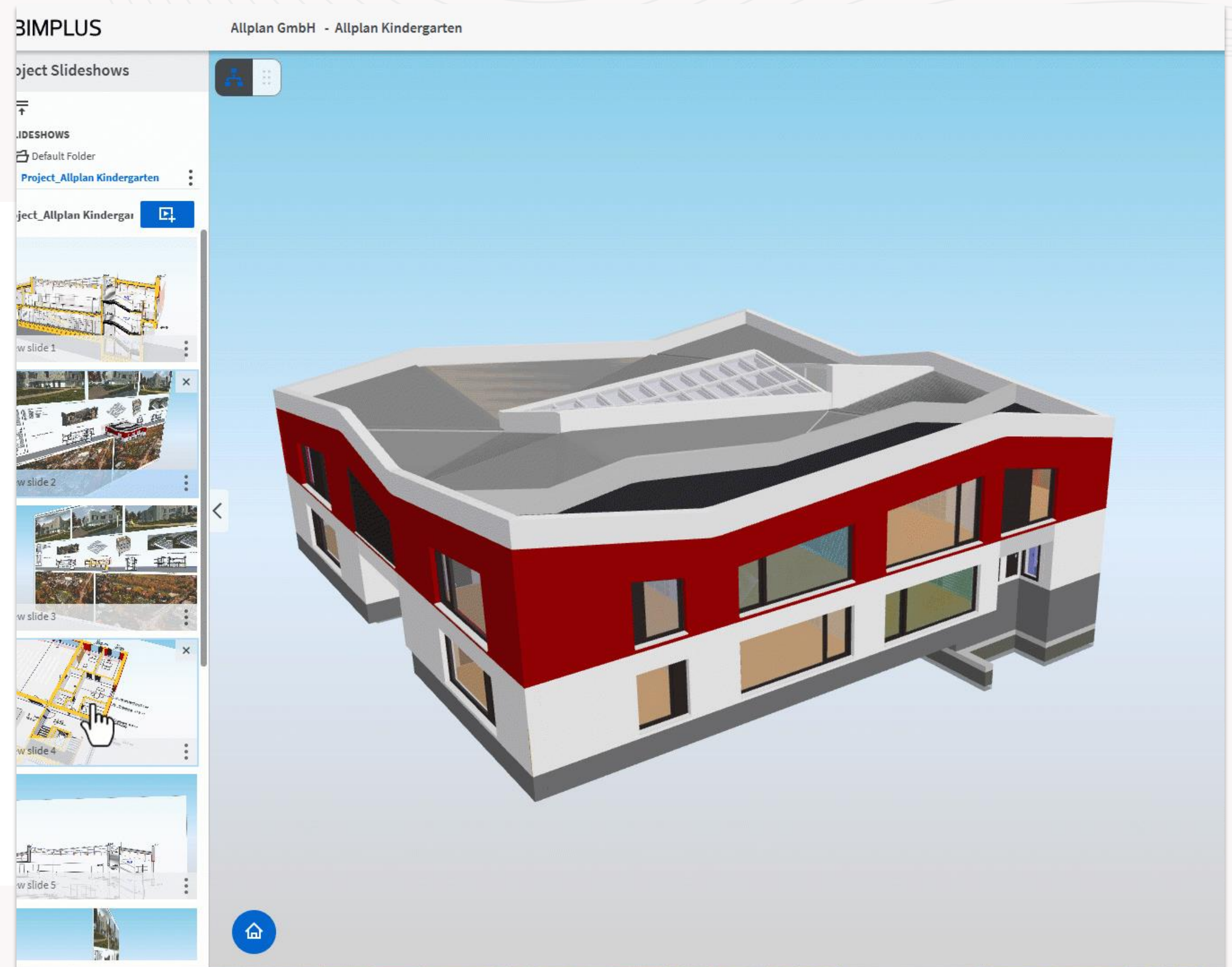
# 2D Overlay

- Compare 3D object and 2D drawings between multiple models
- View 2D markups in a federated model.
- Measure clearances between multi-trade models
- Annotate views for individual use



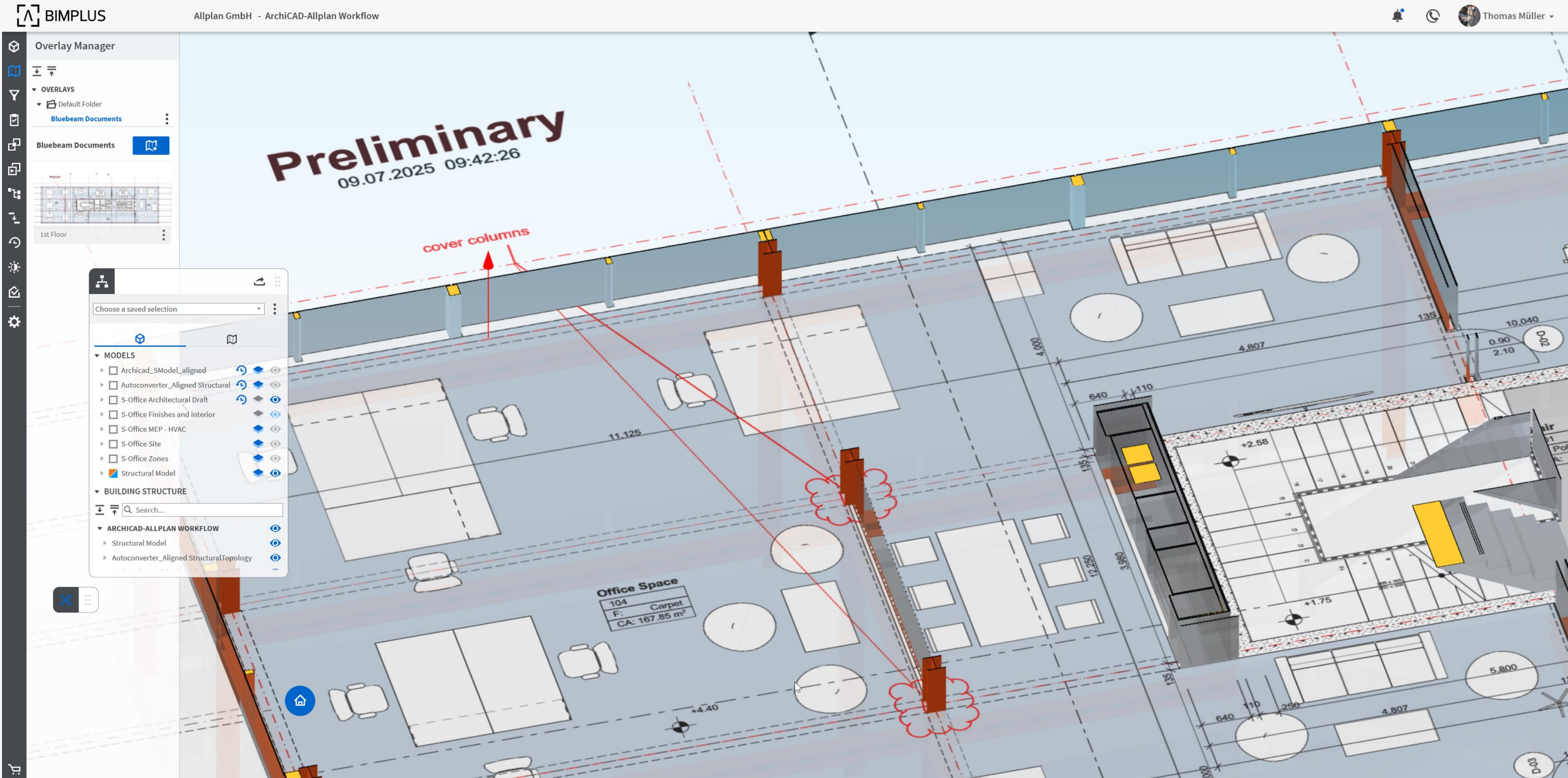
SDS2  
BY ALLPLAN

**ALLPLAN**  
A NEMETSCHEK COMPANY





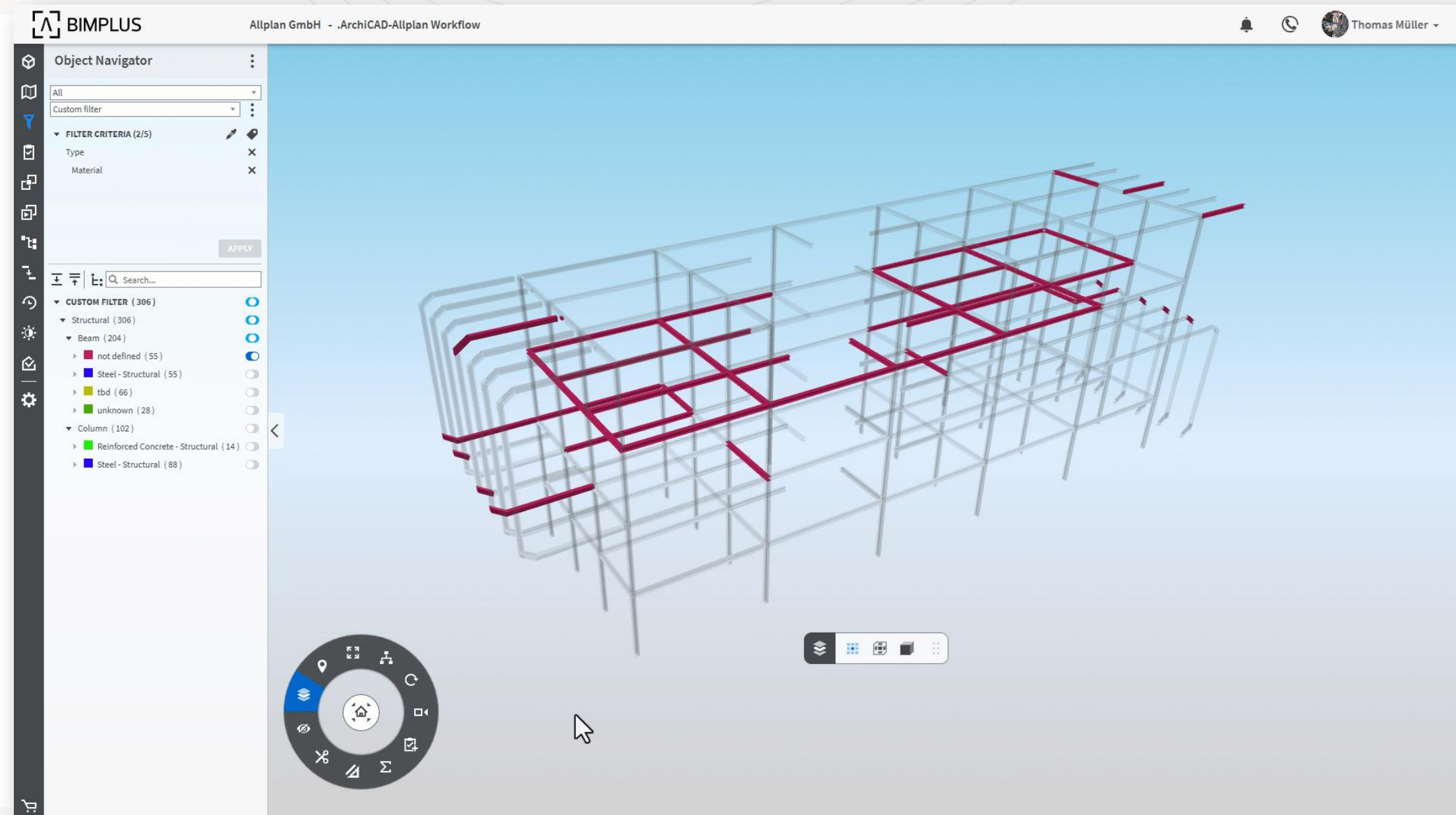
# BLUEBEAM BIM



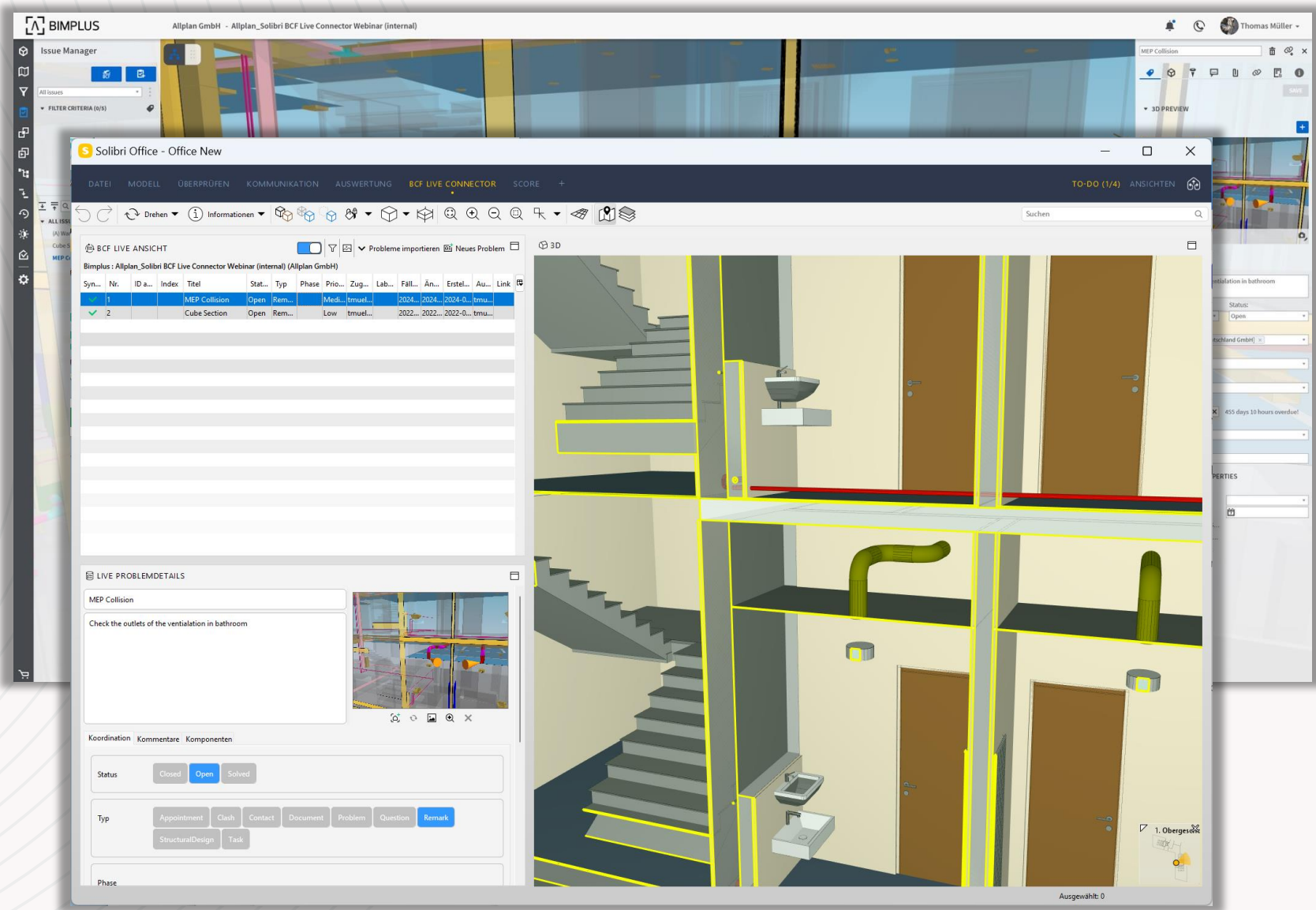


# IFC data in excel

- Enrich models with custom fields
- Edit fields using familiar Excel interface
- Search for and visualize data enrichment in the 3D model in Bimplus



# BLUEBEAM BIM



Streamline communication via the federated model using “Issues” and “Slides”

Open BIM workflows for Issue Management are powered by BCF and BCF API support

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**VECTORWORKS**  
A NEMETSCHEK COMPANY

# Taking Control of Prefabrication

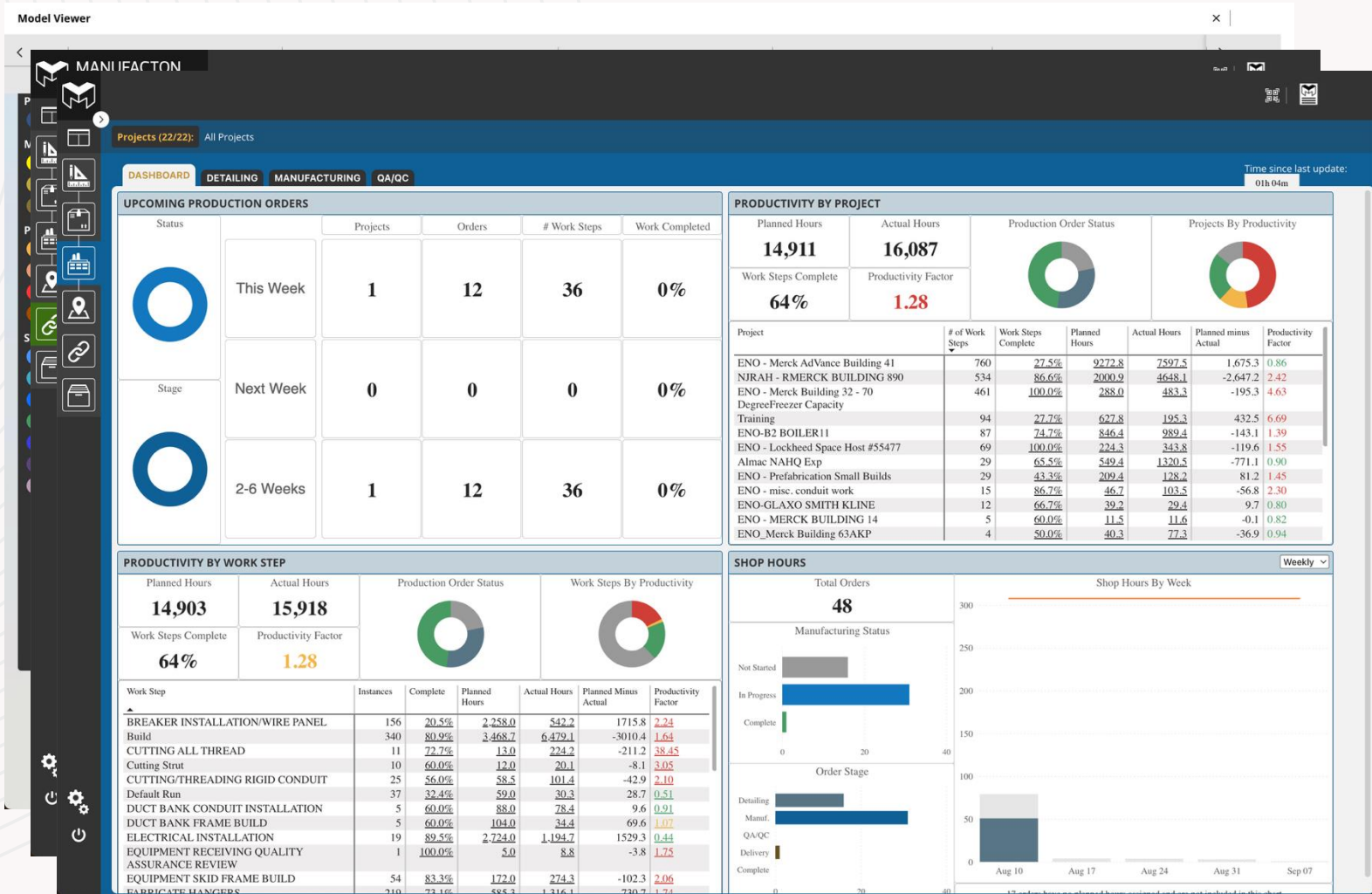
Cloud-based offsite construction and prefabrication management platform that provides real-time visibility across design, production, materials management, and logistics. Combining AI-driven production optimization with comprehensive project management capabilities to help construction firms achieve faster, better, and more sustainable building outcomes.



Take control of MEP prefabrication and Modular builds

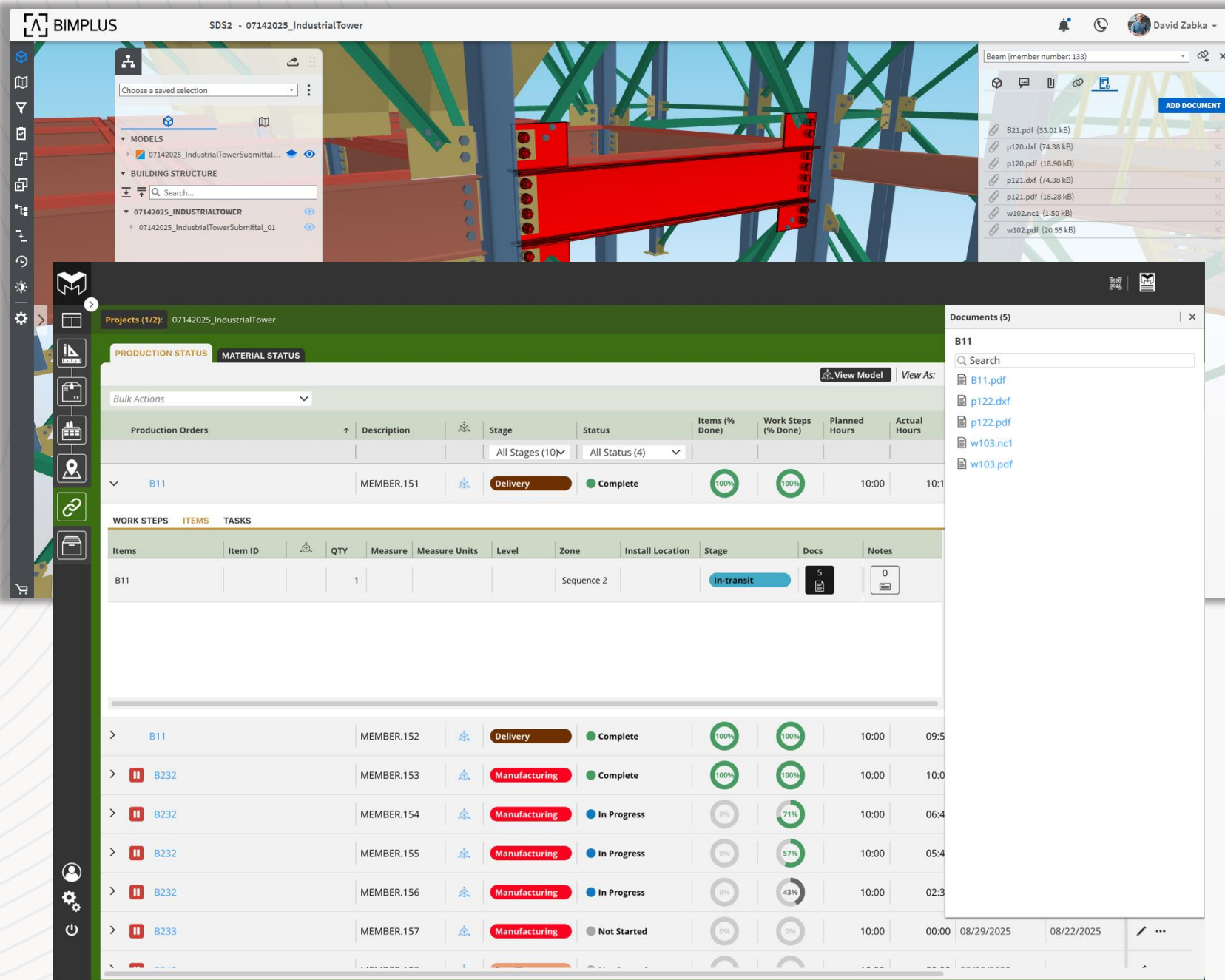
Provide visibility into shop floor production, inventory, shipping, and site installation

Reduce risk with informed decision making utilizing historical data on future projects





# Production Control for Steel and Precast



# Connect detailing data for Steel and Precast fabrication to MES

Improved decision making and visibility into production and installation for fabrication operations



# SDS2



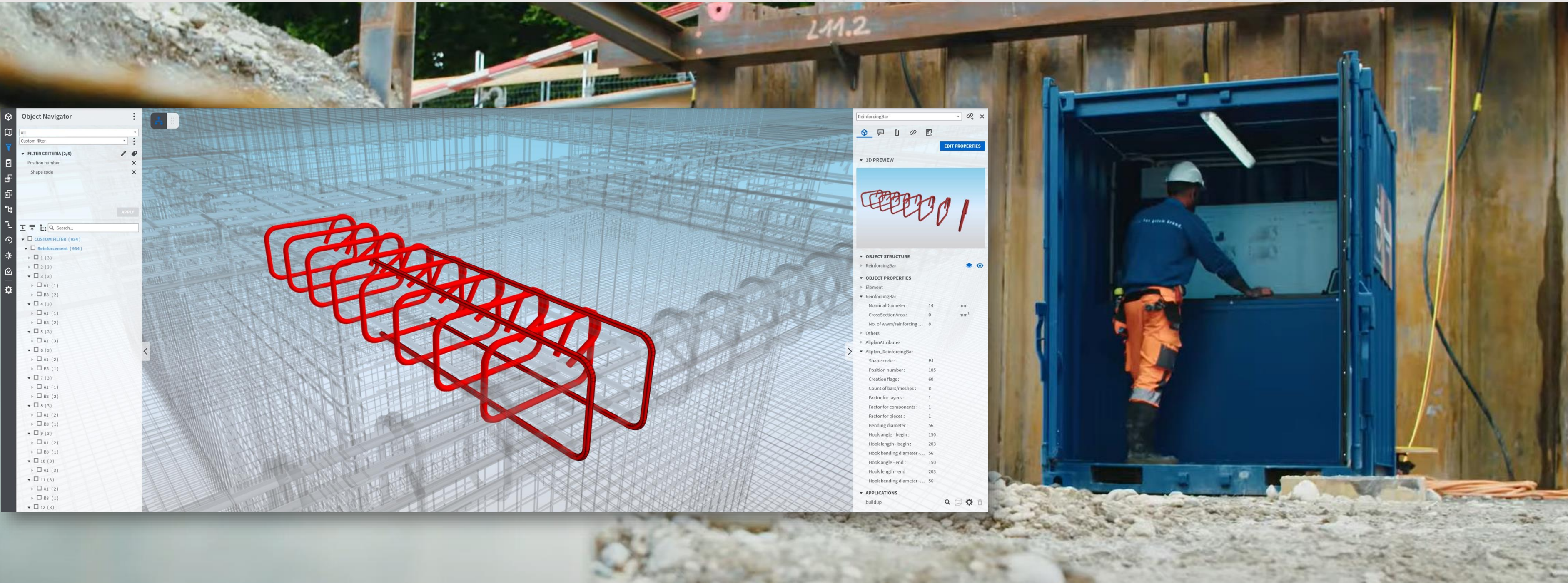
**PRECAST**



MANUFACON



# Construction Site Visibility





# Site Equipment Integration



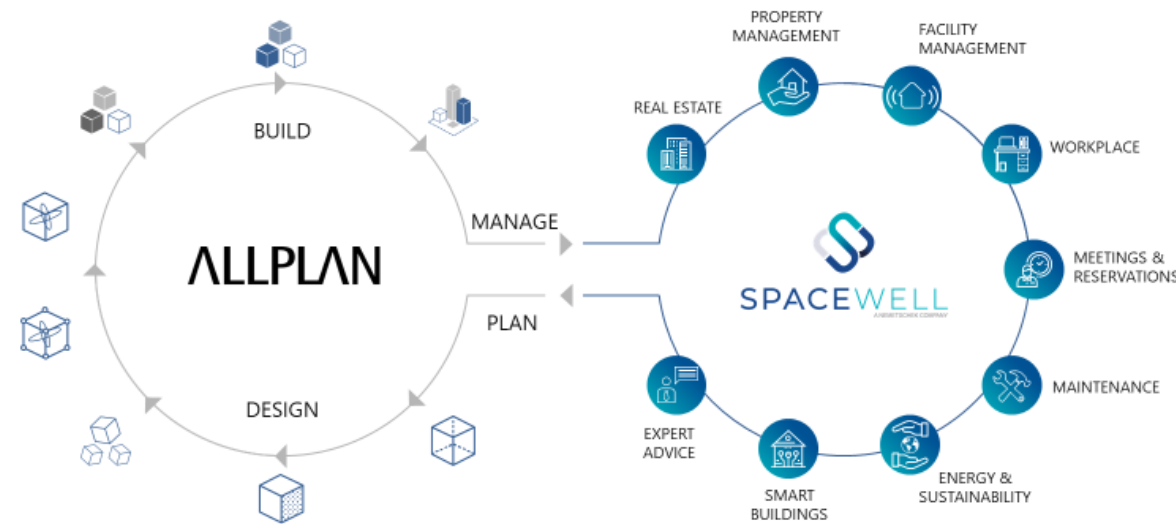
**BIMPLUS**  
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**Leica**  
Geosystems



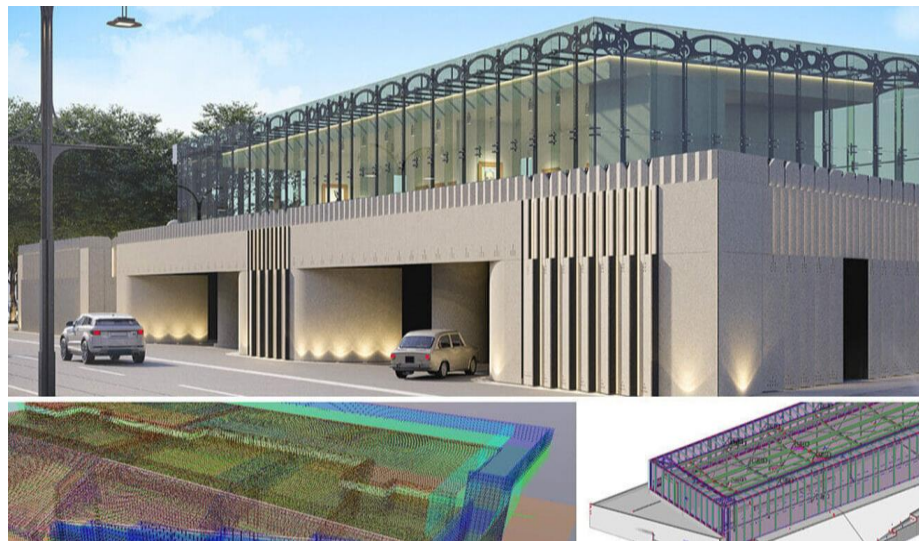
# Facilities Management

- Link equipment, documentation and specifications to the BIM
- Keep Geometry up to date when building changes



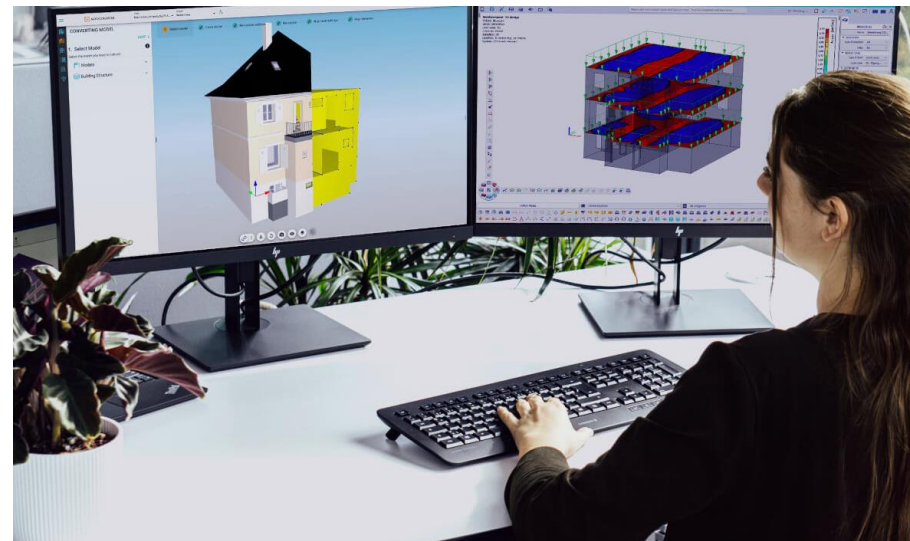
# Break the barriers holding bim back

## Open BIM Formats



- Building Smart Alliance
- IFC, .SAF, .PDF

## Integrated Functionality



- Cross-platform API integrations
- Autodesk – Nemetschek interoperability agreement

## Explore Innovation



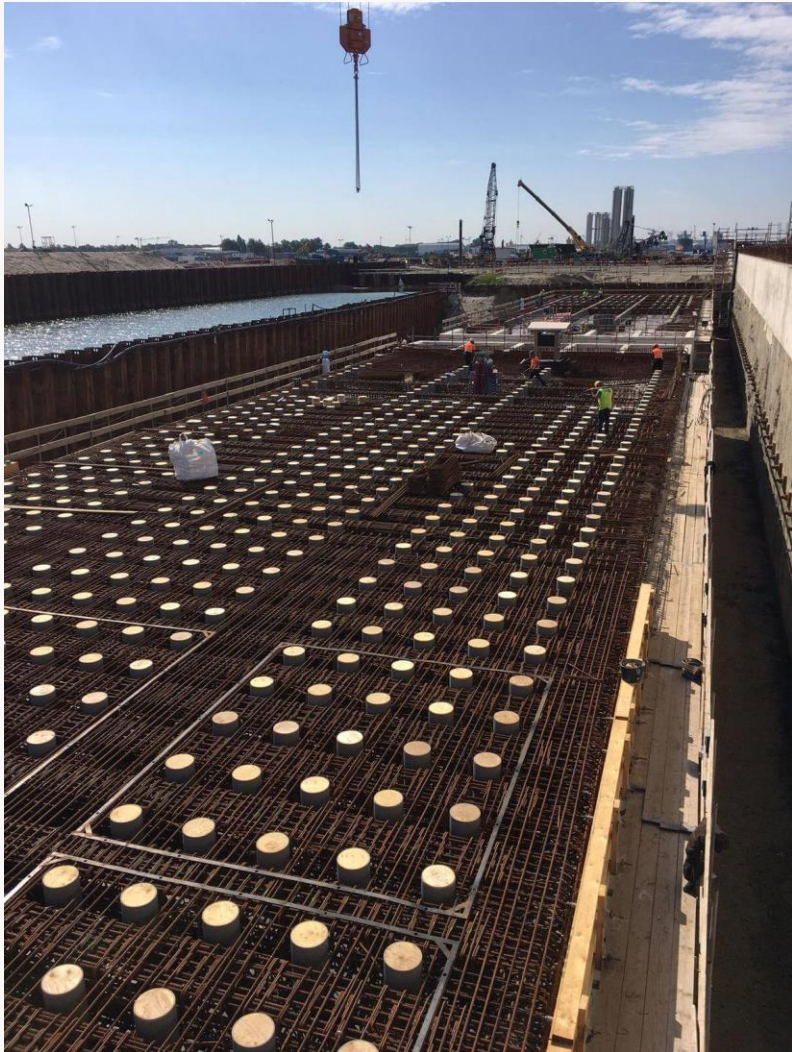
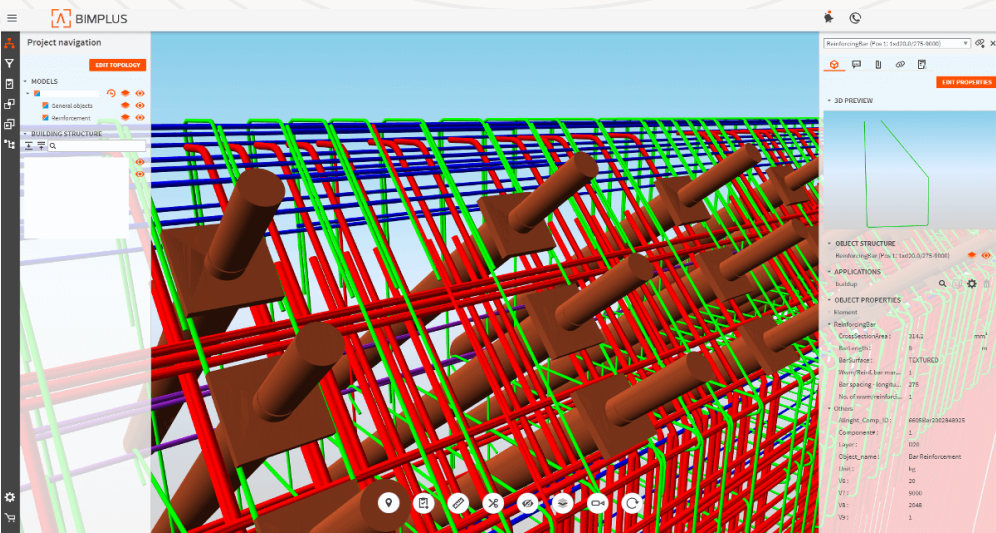
- Use the right tools for the right jobs
- De-risk reliance on a single vendor



# BIMPLUS Helped Build the New Lock Terneuzen

## One of the Biggest Locks in the World

The New Lock Terneuzen (Nieuwe Sluis) in Terneuzen, Netherlands accommodates larger vessels and help reduce congestion along this important shipping route. As one of the biggest locks in the world, the new lock is 427 meters long, 55 meters wide, and 16.4 meters deep.

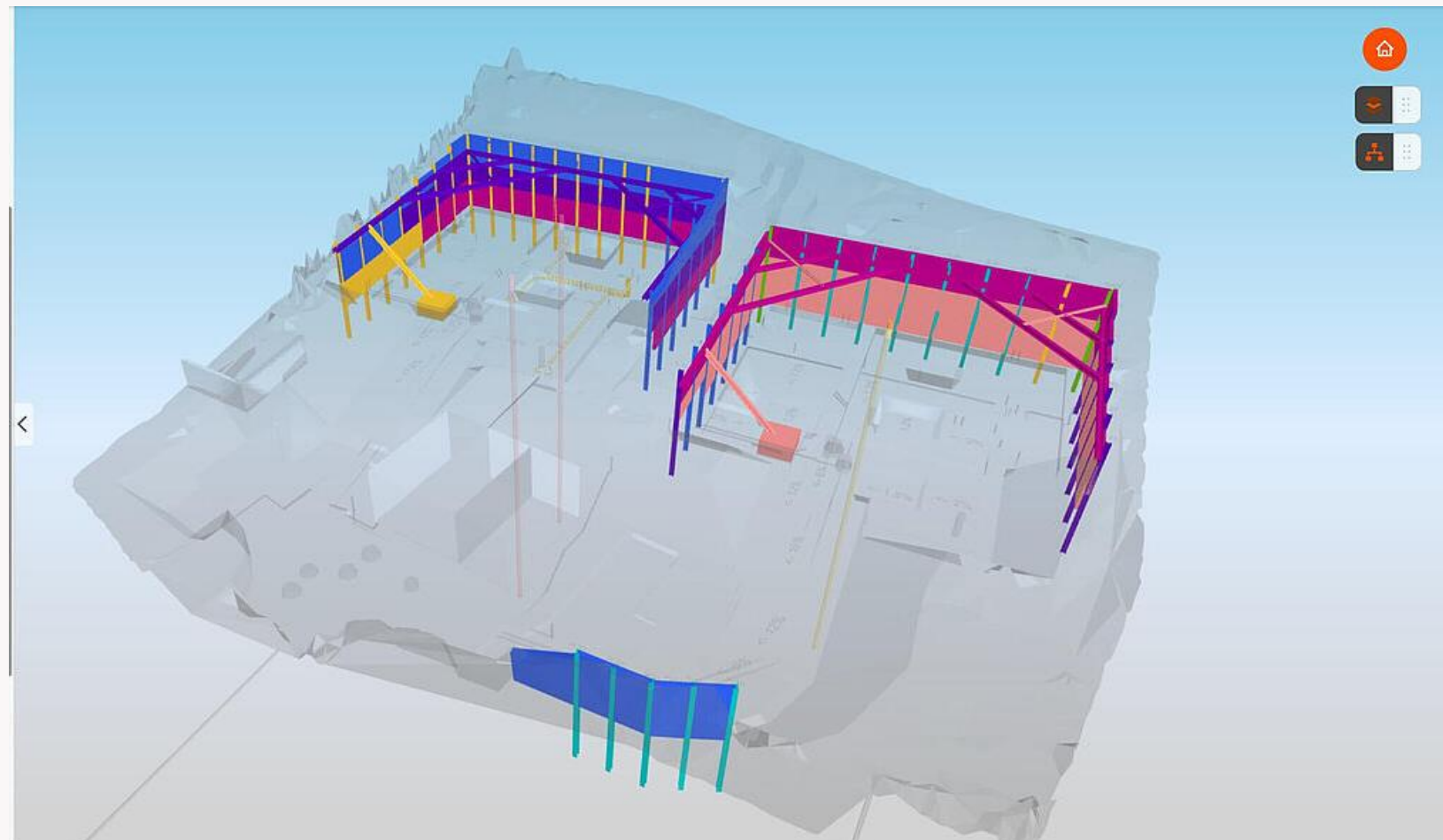




# BIM2Field with KIBAG

## Hundred-year-old business chooses BIMPLUS

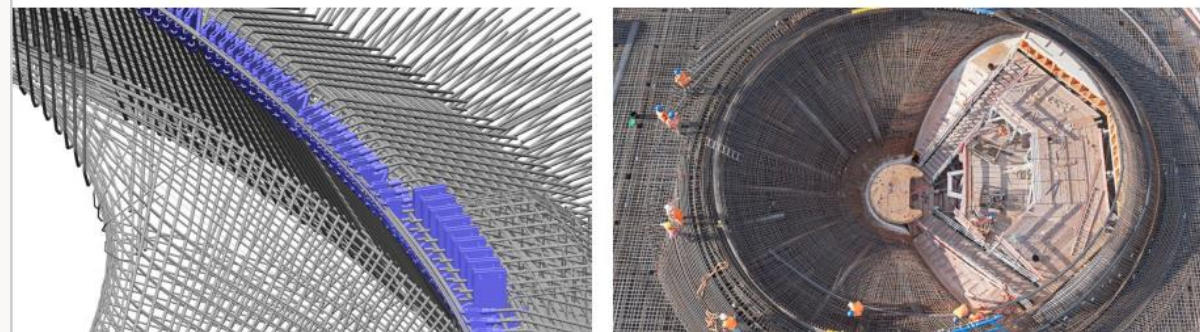
With around 60 locations and around 2,000 employees, the almost hundred-year-old family business KIBAG is one of the leading companies in the Swiss construction and building materials industry. KIBAG has gained numerous positive insights from a BIM pilot project with BIMPLUS in Zurich, in which work was (almost) **exclusively model-based** – also on construction site.





# Stuttgart 21

## Main Station Stuttgart



Germany's largest construction project is slowly approaching the finish line. Most people in this country are familiar with Stuttgart 21 primarily because of its enormous dimensions and the media coverage it has received. In the AEC industry, however, the name is also associated with a masterpiece of engineering.





# Köhlbrand Bridge

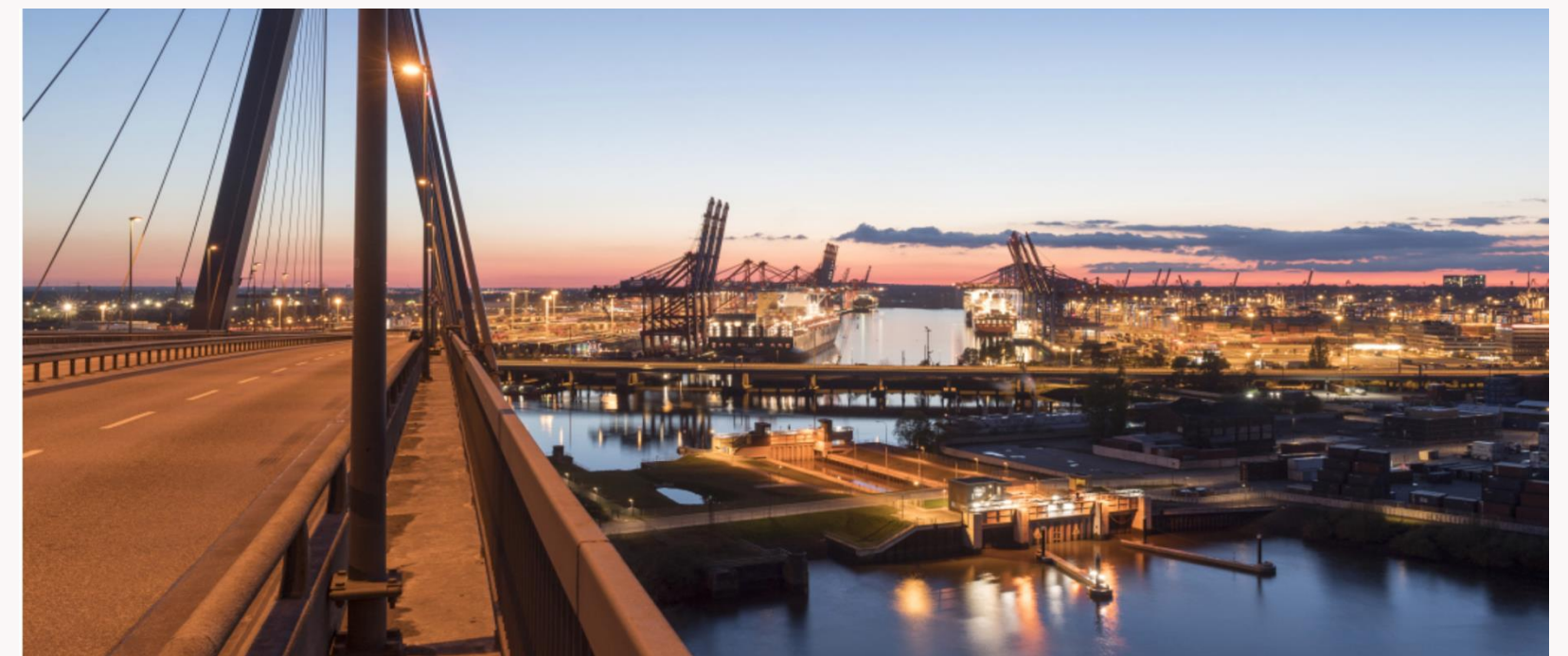
Hamburg Port Authority



Built in 1974, the Köhlbrand Bridge is Germany's second-longest road bridge as well as one of its busiest. The cable-stayed bridge serves around 36,000 vehicles per day, thus playing a crucial role in the local economy.

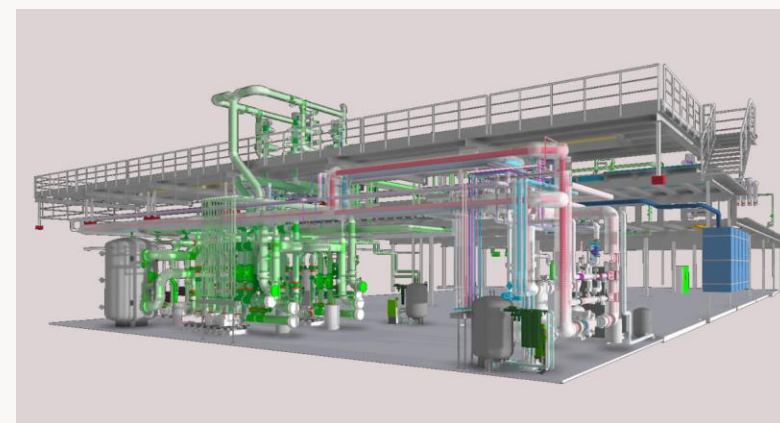
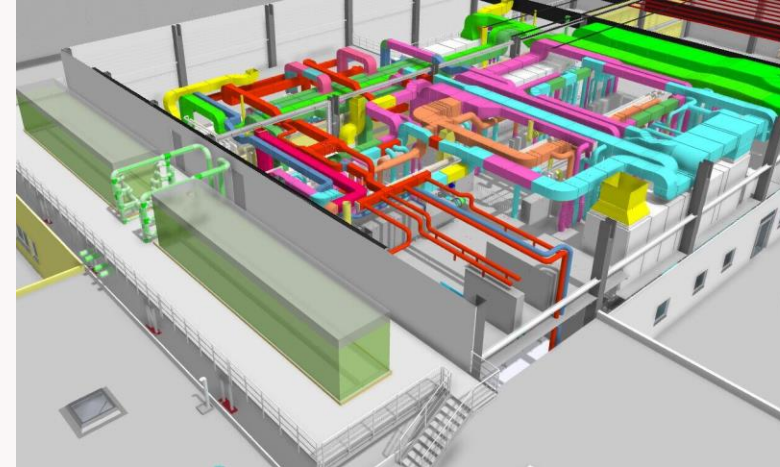
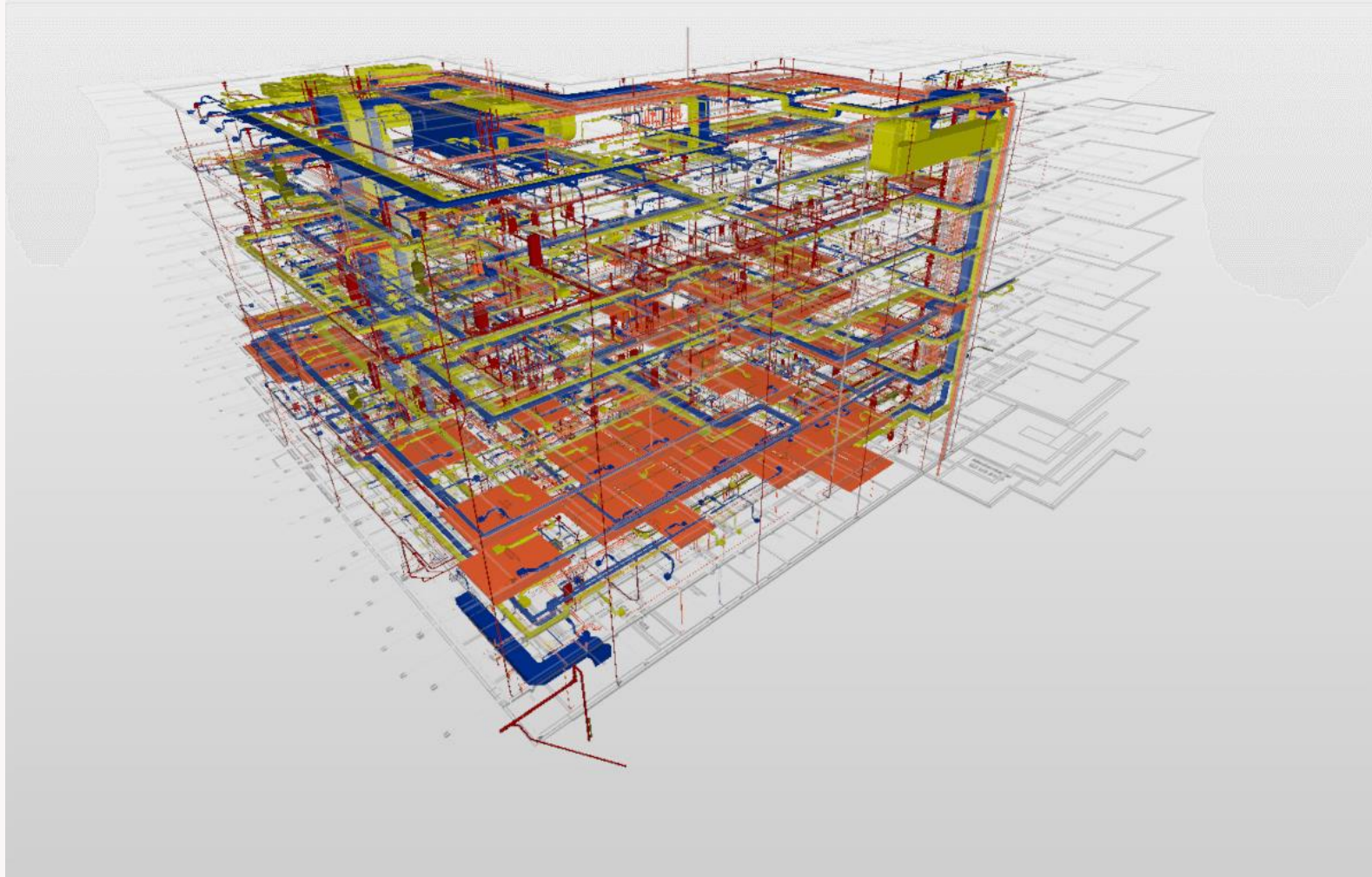
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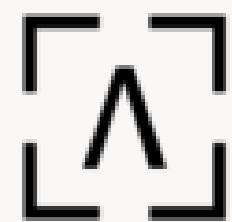
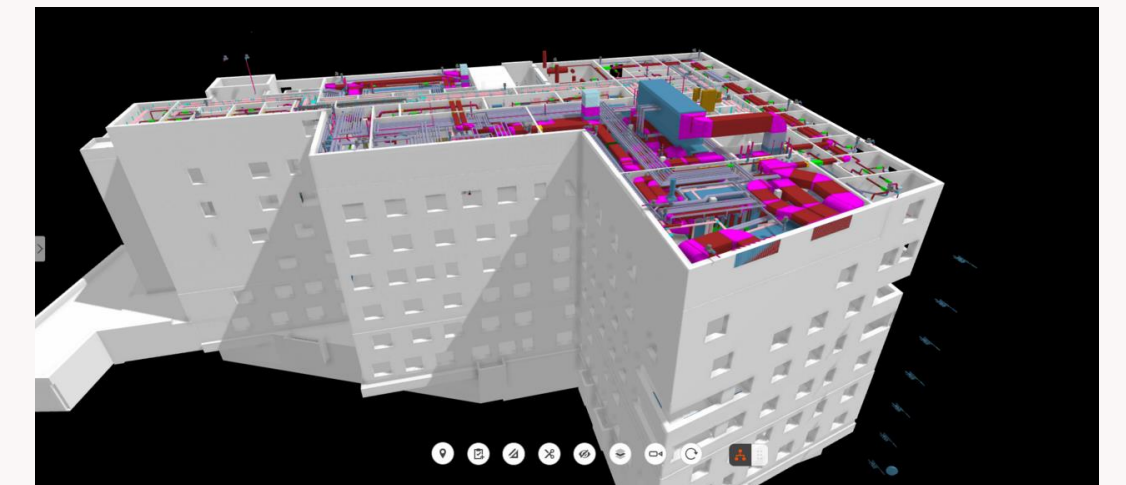




# BIMPLUS enabled many more projects ...



[Case\\_Study\\_Stuttgart\\_21\\_EN\\_GmbH.pdf](#)  
[Case\\_Study\\_Spital\\_St\\_Gallen\\_EN\\_GmbH\\_01.pdf](#)  
[Case\\_Study\\_Altglienicker\\_Bridge\\_EN.pdf](#)  
[BIM2Field in infrastructure construction](#)  
[How STÄBLEINARCHITEKTEN Closes the As-built Gap](#)  
[BIM at the new Stuttgart Cancer Center](#)  
[BIM at KIBAG - pilot project in special civil engineering](#)  
[BIM and IPA at the new Thermoplan plant](#)  
[How BIM Helped Build the New Lock Terneuzen](#)



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# Thank you!

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